

In the Claims:

1. (Currently Amended) A method comprising:
pivotally coupling a housing to a post;
transmitting a defined beam of eyesafe laser energy by a window disposed on an upper end of the post, said beam having an azimuth angle of 360°;
receiving reflected energy from said beam onto a detector stored in the housing, the detector having a two-dimensional array of detector elements and, in response, forming a two-dimensional image representing a contiguous 360° azimuthal view on the detector; ~~and~~
analyzing information in said received energy by an electronic circuit contained in the housing so as to detect the presence of a moving projectile; and
tilting, using a weight disposed on a lower end of the post, the post relative to the housing such that angular movement of the housing allows the beam to remain in a generally horizontal orientation.
2. (Previously Presented) A method according to Claim 1, including configuring said beam to have an elevation angle.
3. (Canceled)
4. (Previously Presented) A method according to Claim 2, including selecting said elevation angle to be approximately 10°.
5. (Canceled)
6. (Original) A method according to Claim 1, wherein said analyzing includes detecting a Doppler shift in said received energy.
7. (Canceled)
8. (Previously Presented) A method according to Claim 6, wherein said receiving includes directing onto said detector a reference beam, so that energy from said defined beam

mixes with energy from said reference beam in each said detector element to produce sum and difference frequencies.

9. (Original) A method according to Claim 7, wherein said analyzing includes supplying an output signal from each said detector element to a plurality of circuit portions which each perform at least one of filtering and fast Fourier transformation.

10. (Original) A method according to Claim 9, wherein said transmitting includes configuring said defined beam to include chirp modulation.

11. (Original) A method according to Claim 9, wherein said transmitting includes configuring said defined beam to be modulated with a single frequency.

12. (Original) A method according to Claim 9, including selecting said reference beam to be substantially equivalent to said defined beam.

13. (Currently Amended) An apparatus comprising:

a gimbal that pivotally couples a housing to a post having an upper end and a lower end, the lower end being coupled to a weight;

a transmitter portion which transmits a defined beam of eyesafe laser energy through a window disposed on the upper end of the post, said beam having an azimuth angle of 360°;

a receiver portion which receives reflected energy from said beam onto a detector stored in the housing, the detector having a two-dimensional array of detector elements and, in response, forming a two-dimensional image representing a contiguous 360° azimuthal view on the detector; and

a further portion which analyzes information in said received energy by an electronic circuit contained in the housing so as to detect the presence of a moving projectile.

14. (Previously Presented) An apparatus according to Claim 13, wherein said beam has an elevation angle.

15. (Canceled)

16. (Previously Presented) An apparatus according to Claim 14, wherein said elevation angle is approximately 10°.

17. (Canceled)

18. (Original) An apparatus according to Claim 13, wherein said further portion includes circuitry which can detect a Doppler shift in said received energy.

19. (Canceled)

20. (Previously Presented) An apparatus according to Claim 18, wherein said receiver includes structure for directing onto said detector a reference beam, energy from said defined beam mixing with energy from said reference beam in each said detector element to produce sum and difference frequencies.

21. (Original) An apparatus according to Claim 19, wherein said circuitry includes a plurality of circuit portions which each perform at least one of filtering and fast Fourier transformation of an output signal from one of said detector elements.

22. (Original) An apparatus according to Claim 21, wherein said defined beam includes chirp modulation.

23. (Original) An apparatus according to Claim 21, wherein said defined beam is modulated with a single frequency.

24. (Original) An apparatus according to Claim 21, wherein said reference beam is substantially equivalent to said defined beam.

25. (Currently Amended) A method comprising:

pivotaly coupling a housing to a post;

transmitting a defined beam of eyesafe laser energy by a window disposed on an upper end of the post, said beam having an azimuth angle of 360°;

receiving reflected energy from said beam onto a detector stored in the housing, the detector having a two-dimensional array of detector elements and, in response, forming a two-dimensional image representing a contiguous 360° azimuthal view on the detector; and

detecting the presence of a moving projectile by detecting a Doppler shift in said received energy by an electronic circuit contained in the housing; ; and

tilting, using a weight disposed on a lower end of the post, the post relative to the housing such that angular movement of the housing allows the beam to remain in a generally horizontal orientation.

26. (Currently Amended) A method comprising:

pivotaly coupling a housing to a post;

transmitting a defined beam of eyesafe laser energy by a window disposed on an upper end of the post throughout a predetermined beam azimuth angle;

receiving reflected energy from said beam onto a detector in the housing, the detector having a two-dimensional array of detector elements and, in response, forming a two-dimensional image representing a contiguous field of regard on the detector; and

analyzing information in said received energy by an electronic circuit contained in the housing simultaneously throughout the field of regard so as to detect the presence of a moving projectile; ; and

tilting, using a weight disposed on a lower end of the post, the post relative to the housing such that angular movement of the housing allows the beam to remain in a generally horizontal orientation;

wherein the field of regard defines a contiguous azimuthal extent that is to be analyzed for the presence of a moving projectile and wherein the beam azimuth angle is substantially equivalent to the field of regard.

27. (Currently Amended) An apparatus comprising:

a gimbal that pivotally couples a housing to a post having an upper end and a lower end, the lower end being coupled to a weight;

a transmitter portion that transmits a defined beam of eyesafe laser energy through a window disposed on the upper end of the post, said beam having a beam azimuth angle;

a receiver portion that receives reflected energy from said beam onto a detector stored in the housing, the detector having a two-dimensional array of detector elements and, in response, forming a two-dimensional image representing a contiguous field of regard on the detector simultaneously throughout the field of regard; and

a further portion that analyzes information in said received energy by an electronic circuit contained in the housing so as to detect the presence of a moving projectile;

wherein the field of regard defines a contiguous azimuthal extent that is to be analyzed and wherein the beam azimuth angle is substantially equivalent to the field of regard.